No. 8100158

THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Western Plant Breeders

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF eighteen YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS DESIGNATED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

DURUM WHEAT

'Westbred 803'

In Testimony Whereof, *I have hereunto set my hand and caused the seal of the* Plant Variety Protection Office *to be affixed at the City of* Washington *this* 15th *day of* April *in the year of our Lord one thousand nine hundred and* eighty-two.

Attest:

Kenneth A. Ev

Acting

Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service

John R Block

Secretary of Agriculture

UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: *See Reverse.*

FORM APPROVED
OMB NO. 40-R3822

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

1a. TEMPORARY DESIGNATION OF VARIETY	1b. VARIETY NAME	FOR OFFICIAL USE ONLY
WDE-8-2-10E	WESTBRED 803 (B 11/12/81)	PV NUMBER 8100158
2. KIND NAME: Durum Wheat	3. GENUS AND SPECIES NAME: Triticum turgidum L. (B durum 9/9/81; C)	FILING DATE 8/27/81 / TIME 1:00 A.M. P.M.
4. FAMILY NAME (BOTANICAL): Gramineae	5. DATE OF DETERMINATION: 6-1-79	FEE RECEIVED $ 500.00 $ 250.00 / DATE 8/27/81 12/10/81

6. NAME OF APPLICANT(S)	7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)	8. TELEPHONE AREA CODE AND NUMBER
~~WPB Acquisition Inc.~~ ~~Western Plant Breeders~~ WESTERN PLANT BREEDERS, INC. (a Maryland Corporation) (10/85)	P. O. Box 1110 1918 W. Van Buren Phoenix, AZ 85001 ATT.: MR. ROBERT HUNTINGTON (12/10/85)	602-257-1223

9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: *(Corporation, partnership, association, etc.)*	10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION	11. DATE OF INCORPORATION
Corporation	Arizona Dec. 1,1977	Dec. 1, 1977

12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS:
Kim C. Shantz
Western Plant Breeders
P. O. Box 1110 Phoenix, AZ 85001

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- [X] 13A. Exhibit A, Origin and Breeding History of the Variety *(See Section 52 of the Plant Variety Protection Act.)*
- [X] 13B. Exhibit B, Novelty Statement.
- [X] 13C. Exhibit C, Objective Description of the Variety *(Request form from Plant Variety Protection Office.)*
- [X] 13D. Exhibit D, Additional Description of the Variety.

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? *(See Section 83(a). (If "Yes," answer 14B and 14C below.)* [X] YES [ ] NO

14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?	14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED?
[X] YES [X] NO (B 12/10/81)	[X] FOUNDATION (B 12/10/81) [X] REGISTERED [X] CERTIFIED

15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? [ ] YES [X] NO *(If "Yes," give name of countries and dates.)*

15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? [ ] YES [X] NO *(If "Yes," give name of countries and dates.)*

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? [X] YES [ ] NO

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

8/24/81 (DATE) — Kim C. Shantz (SIGNATURE OF APPLICANT)

(DATE) — (SIGNATURE OF APPLICANT)

FORM GR-470 (1-78)

13A.

WestBred® 803 is a selection from a composite cross made in 1976. Four high quality northern durum varieties (Ward, Wells, Cando and Wascana) were crossed in all combinations with two high yielding southern durum varieties (Mexicali and WestBred 1000 D). The F_1 seed from these crosses were bulked together and grown in Montana the summer of 1976. The F_2 was grown in Arizona in 1977 and heads were snapped off of 300 different plants. These heads were used to grow F_3 head rows in Montana in 1977. One plant was harvested from each F_3 head row and F_4 plant plots were grown in El Centro, California the harvest season of 1978. Ten heads with the same phenotype were taken from each of the better adopted F_4 plant plots. Head rows that were not segregating and that were of the same phenotype were bulked together for each line at Montana in 1978. There were a total of 120 lines developed and tested in this manner. One line was designated WDE-8-2-10E and later named WestBred 803. WestBred 803 was one of the best yielding lines and had better semolina color than most desert durums.

Thus, WestBred 803 is an F_4 derived head selection bulked in the F_5 generation. The exact parentage is not know but is from one of a number of possible crosses already described.

Once the F_2 heads were selected from the composite cross bulk F_2, a pedigree system of handling subsequent generations was used. One F_3 plant was used to produce the F_4 plant plot and 10 heads from the F_4 were used to produce the F_5. Non-segregating F_5 head rows were bulked together for yield testing. One hundred heads were pulled from the F_6 bulk in 1979 for head row purification in 1980.

The only variant noted, is a black awn type. It has a frequency of less than 1 in 20,000 plants. Present purification procedures should greatly reduce this variant or possibly eliminate it.

WestBred 803 is a stable and uniform variety in agronomic appearance and performance across several generations and growing conditions. Agronomic data to support stability is presented in tables I, III and IV.

13B.

WestBred 803 is a spring durum wheat, early in maturity, with short strong and white straw. It is well adpted to the high yield irrigated areas of Utah, Idaho, Washington and Montana. The semolina dust color of WestBred 803 has white awns and is most similar to Mexicali 75. The beak length of Mexicali 75 is three times as long as the beak length of WestBred 803 (6 mm vs. 2 mm). Also the shoulder of WestBred 803 is oblique while the shoulder of Mexicali 75 is elevated. WestBred 803 is a semi-dwarf and has white chaff, while all the North Dakota durum wheats are either standard height or have red chaff.

FORM APPROVED: OMB NO. 40-R3822

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (*TRITICUM SPP.*)

INSTRUCTIONS: *See Reverse.*

NAME OF APPLICANT(S)
Western Plant Breeders

ADDRESS *(Street and No. or R.F.D. No., City, State, and ZIP Code)*
P. O. Box 1110
Phoenix, AZ 85001

FOR OFFICIAL USE ONLY

PVPO NUMBER 8100158

VARIETY NAME OR TEMPORARY DESIGNATION
West Bred 803

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g. [0][8][9] or [0][9]) when number is either 99 or less or 9 or less.

1. KIND:
[2] 1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB

2. TYPE:
[1] 1 = SPRING 2 = WINTER 3 = OTHER *(Specify)* _____
[2] 1 = SOFT 2 = HARD 3 = OTHER *(Specify)* _____
[3] 1 = WHITE 2 = RED 3 = OTHER *(Specify)* Amber

3. SEASON - NUMBER OF DAYS FROM EMERGENCE TO:
[0][8][8] FIRST FLOWERING
[1][0][2] LAST FLOWERING

4. MATURITY *(50% Flowering)*:
[1][7] NO. OF DAYS *EARLIER* THAN . . . . . [6] 1 = ARTHUR 2 = SCOUT 3 = CHRIS
[ ][ ] NO. OF DAYS *LATER* THAN . . . . . [ ] 4 = LEMHI 5 = NUGAINES 6 = LEEDS

5. PLANT HEIGHT *(From soil level to top of head)*:
[0][8][5] CM. HIGH
[ ][ ] CM. TALLER THAN . . . . . [ ]
[3][0] CM. SHORTER THAN . . . . . [6] 1 = ARTHUR 2 = SCOUT 3 = CHRIS 4 = LEMHI 5 = NUGAINES 6 = LEEDS

6. PLANT COLOR AT BOOTING *(See reverse)*:
[3] 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN

7. ANTHER COLOR:
[1] 1 = YELLOW 2 = PURPLE

8. STEM:
[1] Anthocyanin: 1 = ABSENT 2 = PRESENT
[2] Waxy bloom: 1 = ABSENT 2 = PRESENT
[1] Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT
[1] Internodes: 1 = HOLLOW 2 = SOLID
[0][4] NO. OF NODES *(Originating from node above ground)*
[2][0] CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

9. AURICLES:
[2] Anthocyanin: 1 = ABSENT 2 = PRESENT
[1] Hairiness: 1 = ABSENT 2 = PRESENT

10. LEAF:
[1] Flag leaf at booting stage: 1 = ERECT 2 = RECURVED 3 = OTHER *(Specify)*: _____
[2] Flag leaf: 1 = NOT TWISTED 2 = TWISTED
[1] Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT
[2] Waxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT
[1][4] MM. LEAF WIDTH *(First leaf below flag leaf)*
[2][3] CM. LEAF LENGTH *(First leaf below flag leaf)*:

8100158

11. HEAD:

[2] Density: 1 = LAX 2 = DENSE

[2] Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE 4 = OTHER *(Specify)* _____

[4] Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED

[1] Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED 5 = BROWN 6 = BLACK 7 = OTHER *(Specify)*: _____

[0][9] CM. LENGTH

[1][8] MM. WIDTH

12. GLUMES AT MATURITY:

[3] Length: 1 = SHORT *(CA. 7 mm.)* 2 = MEDIUM *(CA. 8 mm.)* 3 = LONG *(CA. 9 mm.)*

[3] Width: 1 = NARROW *(CA. 3 mm.)* 2 = MEDIUM *(CA. 3.5 mm.)* 3 = WIDE *(CA. 4 mm.)*

[2] Shoulder shape: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED 4 = SQUARE 5 = ELEVATED 6 = APICULATE

[3] Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

13. COLEOPTILE COLOR:

[1] 1 = WHITE 2 = RED 3 = PURPLE

14. SEEDLING ANTHOCYANIN:

[1] 1 = ABSENT 2 = PRESENT

15. JUVENILE PLANT GROWTH HABIT:

[3] 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

16. SEED:

[3] Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL

[2] Cheek: 1 = ROUNDED 2 = ANGULAR

[1] Brush: 1 = SHORT 2 = MEDIUM 3 = LONG

[1] Brush: 1 = NOT COLLARED 2 = COLLARED

[ ] Phenol reaction *(See instructions)*: 1 = IVORY 2 = FAWN 3 = LT. BROWN 4 = BROWN 5 = BLACK

[2] Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER *(Specify)* _____

[1][0] MM. LENGTH

[0][4] MM. WIDTH

[5][5] GM. PER 1000 SEEDS

17. SEED CREASE:

[3] Width: 1 = 60% OR LESS OF KERNEL 'WINOKA' 2 = 80% OR LESS OF KERNEL 'CHRIS' 3 = NEARLY AS WIDE AS KERNEL 'LEMHI'

[1] Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT' 2 = 35% OR LESS OF KERNEL 'CHRIS' 3 = 50% OR LESS OF KERNEL 'LEMHI'

18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

[0] STEM RUST *(Races)* _____

[0] LEAF RUST *(Races)* _____

[0] STRIPE RUST *(Races)* _____

[0] LOOSE SMUT

[1] POWDERY MILDEW

[0] BUNT

[0] OTHER *(Specify)* _____

19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

[0] SAWFLY

[0] APHID *(Bydv.)*

[0] GREEN BUG

[0] CEREAL LEAF BEETLE

[ ] OTHER *(Specify)* _____

HESSIAN FLY RACES: [0] GP [0] A [0] B [0] C [0] D [0] E [0] F [0] G

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Mexicali	Seed size	Mexicali
Leaf size	Mexicali	Seed shape	Mexicali
Leaf color	Aldura	Coleoptile elongation	Mexicali
Leaf carriage	Mexicali	Seedling pigmentation	Mexicali

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

(a) L.W. Briggle and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.

(b) W.E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts. *(See attachment.)*

LEAF COLOR: Nickerson's or any recognized color fan should be used to determine the leaf color of the described variety.

8100158

Table II.

Milling and pasta quality of WestBred 803 compared to Vic, Calvin and Ward.

Variety:	WestBred 803	Vic	Calvin	Ward
Location:	Conrad, MT.	Conrad, MT.	Conrad, MT.	Conrad, MT.
Test Weight:	63.0	64.1	65.5	63.5
1000 K.W.T.	58.8	56.5	50.8	52.1
Yield in #/A:	6008.0	4584.0	5191.0	3517.0
Wheat Pro. %:	11.3	15.0	12.8	15.1
Semo. Ext.:	57.3	55.3	57.0	54.8
Semo. Dust Color:	13.5	13.0	12.5	12.0
Spag. Color:	9.5	9.0	9.0	9.0
Mixo. Score:	4.0	4.0	2.0	2.0
Spag. Firm. Score:	7.08	8.29	7.34	6.85

Table III.

Hard amber vitreous counts (HAVC) of WestBred 803 in Western Plant Breeders' trials.

LOCATION	YEAR	WESTBRED 803	WESTBRED 1000 D	MEXICALI	CALVIN	WARD
Phoenix, AZ.	1980	69	55	92	77	--
El Centro, CA.	1980	76	81	91	93	--
Corcoran, CA.	1980	67	78	78	82	--
Nampa, ID.	1979	87	--	--	85	96
	1980	82	88	--	92	100
Tremonton, UT.	1980	80	--	--	74	85

Table IV.

Number of days to heading of WestBred® 803 and presently grown varieties in Western Plant Breeders and public trials.

LOCATION	YEAR	WESTBRED® 803	MEXICALI	ALDURA	CANDO	WAIDE
El Centro, CA.	1980	122	122	129	---	---
Lind, WA.	1980	158	---	159	159	163
Royal Slope, WA.	1980	151	---	163	155	156

Table V.

Plant height of WestBred® 803 and presently grown varieties in Western Plant Breeders and public trials.

LOCATION	YEAR	WESTBRED® 803	MEXICALI	CALVIN	VIC	WAIDE
El Centro, CA.	1980	34	35	37	--	--
Cocoran, CA.	1980	39	39	42	--	--
Nampa, ID.	1980	32	--	31	49	--
Royal Slope, WA.	1980	32	--	30 (Cando)	--	31

Table VI.

Milling and pasta quality of WestBred® 803 compared to WestBred® 1000D, Calvin and Aldura grown in Arizona in 1979.

VARIETY:	WestBred® 803	Calvin	WestBred® 1000D	Aldura
LOCATION:	Phoenix, AZ	Phoenix, AZ	Phoenix, AZ	Yuma, AZ
TEST WEIGHT:	58.7	60.4	57.1	64.8
100 KWT.:	45.0	38.8	42.7	49.8
WHEAT PRO %:	13.0	14.5	14.8	10.7
SEMO. EXT.:	59.4	58.2	56.6	62.0
SEMO. RUST COLOR:	13.0	13.5	11.5	13.5
SPAG. COLOR:	9.5	9.5	9.0	9.5
MIXO. SCORE:	3.0	2.0	3.0	2.0
SPAG. FIRM SCORE:	7.95	7.19	9.91	6.13